pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0010677**
Facility Type	**Industrial**	APS ID	**32951**
Major / Minor	**Minor**	Authorization ID	**1377086**

NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

Applicant and Facility Information

Applicant Name	**Veeder Root Co.**	Facility Name	**Veeder Root Meter Manufacturing**
Applicant Address	2709 Route 764	Facility Address	2709 Route 764
	Duncansville, PA 16635-8047		Duncansville, PA 16635-8047
Applicant Contact	Stefan Long	Facility Contact	Stefan Long
Applicant Phone	(814) 341-0411	Facility Phone	(814) 341-0411
Client ID	7935	Site ID	245304
SIC Code	3823	Municipality	Allegheny Township
SIC Description	Manufacturing - Process Control Instruments	County	Blair
Date Application Received	November 18, 2021	EPA Waived?	Yes
Date Application Accepted	December 6, 2021	If No, Reason	

Purpose of Application: This is an application for NPDES renewal.

Approve	Deny	Signatures	Date
X		Nicholas Hong, P.E. / Environmental Engineer Nick Hong (via electronic signature)	May 12, 2022
x		Daniel W. Martin, P.E. / Environmental Engineer Manager Maria D. Bebenek for	May 26, 2022
x		Maria D. Bebenek, P.E. / Environmental Program Manager Maria D. Bebenek	May 26, 2022

Summary of Review

The application submitted by the applicant requests a NPDES renewal permit for the Veeder Root Inc. located at 2709 Route 764, Duncansville, PA 16635 in Blair County, municipality of Allegheny. The existing permit became effective on April 1, 2017 and expired on March 31, 2022. The application for renewal was received by DEP Southcentral Regional Office (SCRO) on November 18, 2021.

The purpose of this Fact Sheet is to present the basis of information used for establishing the proposed NPDES permit effluent limitations. The Fact Sheet includes a description of the facility, a description of the facility's receiving waters, a description of the facility's receiving waters attainment/non-attainment assessment status, and a description of any changes to the proposed monitoring/sampling frequency. Section 6 provides the justification for the proposed NPDES effluent limits derived from technology based effluent limits (TBEL), water quality based effluent limits (WQBEL), total maximum daily loading (TMDL), antidegradation, anti-backsliding, and/or whole effluent toxicity (WET). A brief summary of the outlined descriptions has been included in the Summary of Review section.

The subject facility is a 0.0098 MGD treatment facility. The applicant does not anticipate any proposed upgrades to the treatment facility in the next five years. The NPDES application has been processed as an Industrial Wastewater Facility due to the type of wastewater and the design flow rate for the facility. The applicant disclosed the Act 14 requirement to Blair County and Allegheny Township and the notice was received by the parties on November 15, 2021 and April 27,2022.

Utilizing the DEP's web-based Emap-PA information system, the receiving waters has been determined to be Tributary 16379 to Spencer Run. The sequence of receiving streams that the Tributary 16379 to Spencer Run discharges into are Spencer Run, Beaverdam Branch, Frankstown Juniata River, Juniata River, and the Susquehanna River which eventually drains into the Chesapeake Bay. Due to the discharge of non-contact cooling water, the facility is not subject to the Chesapeake Bay implementation requirements. The receiving waters has protected water usage for warm water fishes (WWF) and migratory fishes (MF). No Class A Wild Trout fisheries are impacted by this discharge. The absence of high quality and/or exceptional value surface waters removes the need for an additional evaluation of anti-degradation requirements.

The Tributary 16379 to Spencer Run is a Category 2 stream listed in the 2022 Integrated List of All Waters (formerly 303d Listed Streams). This stream is an attaining stream that supports aquatic life. The receiving waters is subject to the Beaverdam Branch Watershed total maximum daily load (TMDL) plan to improve water quality in the subject facility's watershed.

The existing permit and proposed permit differ as follows:

- **There are no changes to the monitoring frequency or effluent limits.**

Sludge use and disposal description and location(s): Sludge/biosolids disposal is not suspected at this facility.

The proposed permit will expire five (5) years from the effective date.

Based on the review in this report, it is recommended that the permit be drafted. DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Any additional information or public review of documents associated with the discharge or facility may be available at PA DEP Southcentral Regional Office (SCRO), 909 Elmerton Avenue, Harrisburg, PA 17110. To make an appointment for file review, contact the SCRO File Review Coordinator at 717.705.4700.

1.0 Applicant

1.1 General Information

This fact sheet summarizes PA Department of Environmental Protection's review for the NPDES renewal for the following subject facility.

Facility Name:	Veeder-Root Co.
NPDES Permit #	PA0010677
Physical Address:	2709 Route 764 Duncansville, PA 16635
Mailing Address:	2709 Route 764 Duncansville, PA 16635
Contact:	Stefan Long EHS Specialist and Sustainability Lead slong@veeder.com
Consultant:	There was not a consultant utilized for this NPDES renewal

1.2 Permit History

Description of Facility

Veeder-Root manufactures environmental devices for the retail petroleum industry. This includes pumps, motors, leak detection, fuel monitoring, and consulting devices. The operation includes non-contact cooling water which is recirculated and replenished as necessary. Discharge occurs to surface waters.

Sources of Water

- Water is supplied from the city

Permit submittal included the following information.

- NPDES Application
- Flow Diagrams

The NPDES application reports that the receiving waters is Unnamed Tributary to Spencer Run (40^0 27' 9"; -78^0 25' 53")

2.0 Treatment Facility Summary

2.1.1 Site location

The physical address for the facility is 2709 Route 764, Duncansville, PA 16635. A topographical and an aerial photograph of the facility are depicted as Figure 1 and Figure 2.

Figure 1: Topographical map of the subject facility

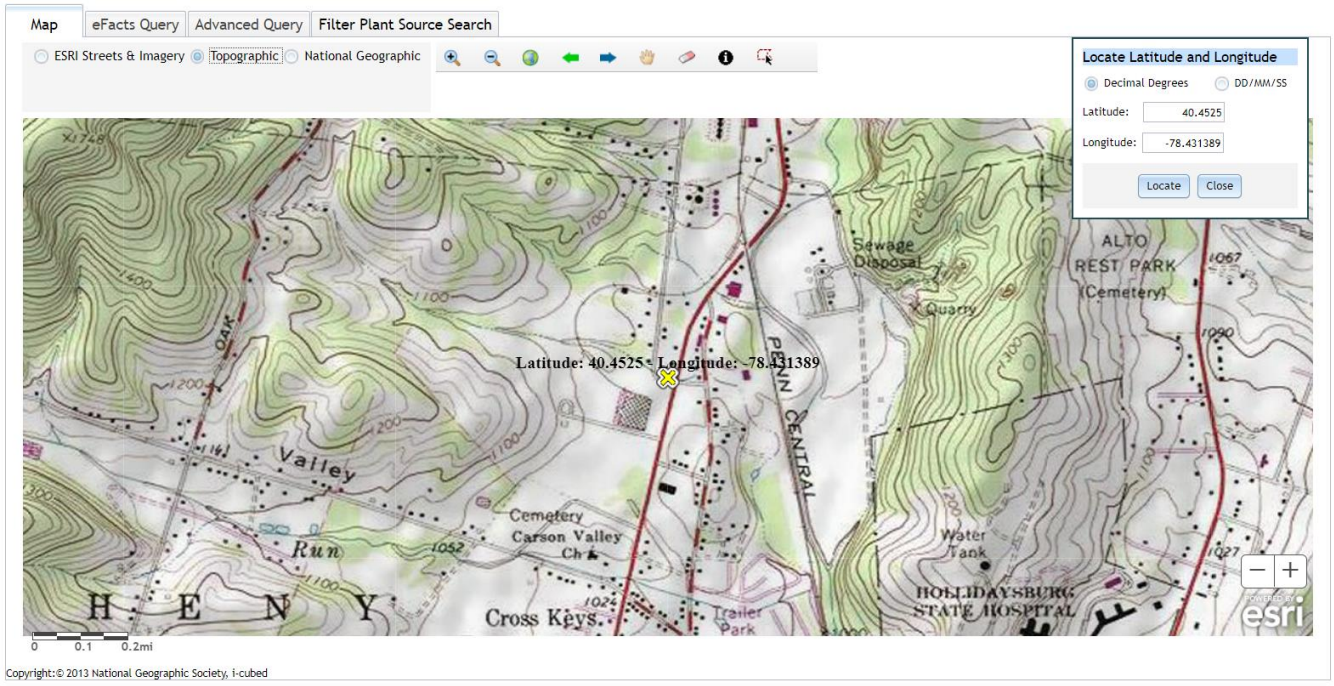
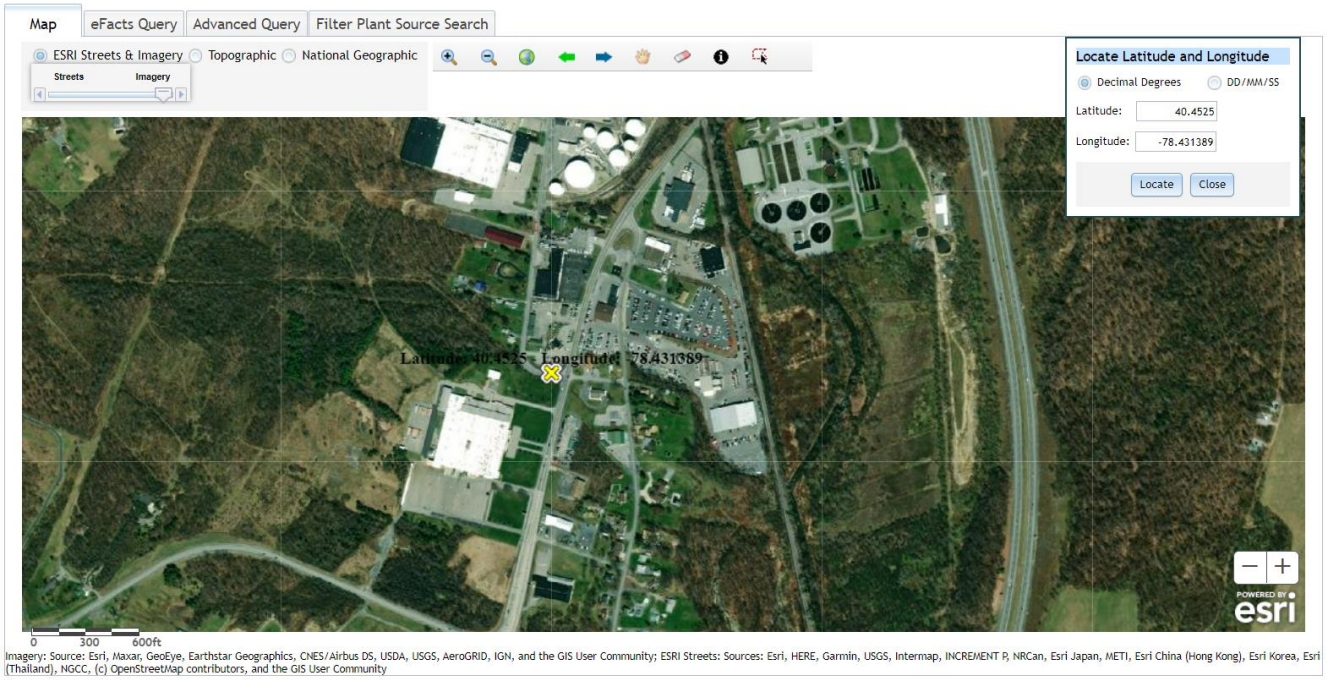


Figure 2: Aerial Photograph of the subject facility



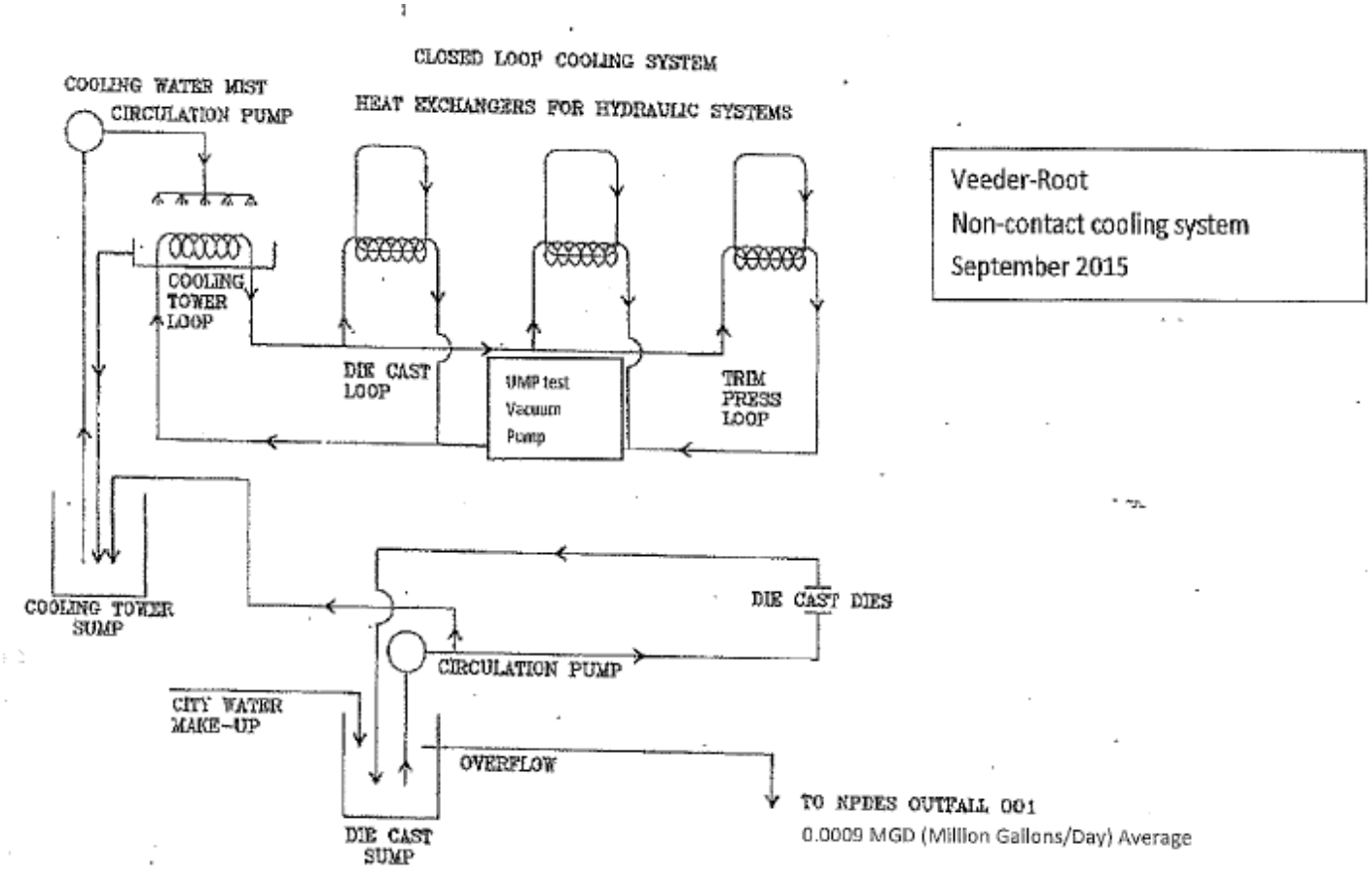
2.2 Description of Wastewater Treatment Process

The subject facility is a 0.0098 MGD average design flow facility. The subject facility treats wastewater with sulfuric acid due to the high pH from the city water. The process wastewater and sanitary wastewater is sent to the Altoona POTW. The facility is being evaluated for flow, pH and temperature. The existing permits limits for the facility is summarized in Section 2.4.

The flow diagram reported a flow rate of 0.0009 MGD. The NPDES application reported a flow rate of 0.0025 MGD. The current permit reported a flow rate of 0.0098 MGD. Via email correspondence on April 27, 2022, the facility estimated the average daily flow from DMRs as 0.002 MGD.

For consistency, the current flow rate in the NPDES permit of 0.0098 MGD was utilized for the proposed Fact Sheet. The flow rate is larger than other flow rates reported by the facility. It would also model worst case scenario.

A schematic of the treatment process is shown below.



2.3 Facility Outfall Information

The facility has the following outfall information for wastewater.

Outfall No.	001	**Design Flow (MGD)**	.0098
Latitude	40º 27' 9.00"	**Longitude**	-78º 25' 53.00"
Wastewater Description:	Noncontact Cooling Water (NCCW)		

2.3.1 Operational Considerations- Chemical Additives

Chemical additives are chemical products introduced into a waste stream that is used for cleaning, disinfecting, or maintenance and which may be detected in effluent discharged to waters of the Commonwealth. Chemicals excluded are those used for neutralization of waste streams, the production of goods, and treatment of wastewater.

The subject facility utilizes the following chemicals as part of their treatment process.

- The facility did not report any chemical usages for the wastewater treatment process.

2.4 Existing NPDES Permits Limits

The existing NPDES permit limits are summarized in the table.

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. A. For Outfall 001 , **Latitude** 40° 27' 9.00" , **Longitude** 78° 25' 53.00" , **River Mile Index** 0.68 , **Stream Code** 16379

Receiving Waters: Unnamed Tributary to Spencer Run

Type of Effluent: Noncontact Cooling Water (NCCW)

1. The permittee is authorized to discharge during the period from **April 1, 2017** through **March 31, 2022**
2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes).

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
Temperature (deg F) (°F)	XXX	XXX	XXX	XXX	Report	XXX	1/day	I-S

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 001

3.0 Facility NPDES Compliance History

3.1 Summary of Inspections

A summary of the most recent inspections during the existing permit review cycle is as follows.

The DEP inspector noted the following during the inspection.

01/23/2018: Cooling water is recirculated and replenished with cooler water as needed. Excess water overflows from concrete tank where it is tested for pH. The pH is adjusted as necessary.

3.2 Summary of DMR Data

A review of approximately 1-year of DMR data shows that the monthly average flow data for the facility below the design capacity of the treatment system. The maximum average flow data for the DMR reviewed was 0.0076 MGD. The design capacity of the treatment system is 0.0098 MGD.

DMR Data for Outfall 001 (from March 1, 2021 to February 28, 2022)

Parameter	FEB-22	JAN-22	DEC-21	NOV-21	OCT-21	SEP-21	AUG-21	JUL-21	JUN-21	MAY-21	APR-21	MAR-21
Flow (MGD) Average Monthly	0.000245	0.000483	0.000483	0.001127	0.002335	0.004682	0.0076	0.00214	0.000321	0.000102	0.000129	0.000133
Flow (MGD) Daily Maximum	0.00095	0.00127	0.00127	0.00271	0.00415	0.00824	0.058	0.00455	0.00094	0.00093	0.00117	0.00078
pH (S.U.) Minimum	6.94	6.72	6.72	5.28	6.6	6.7	6.03	6.08	6.24	6.53	4.28	6.16
pH (S.U.) Instantaneous Maximum	8.48	7.88	7.96	7.86	7.87	7.86	8.02	8.24	7.94	7.83	7.97	7.8
Temperature (ºF) Daily Maximum	78	77	77	78	78	81	79	79	78	78	77	77

3.3 Non-Compliance

3.3.1 Non-Compliance- NPDES Effluent

A summary of the non-compliance to the permit limits for the existing permit cycle is as follows.

From the DMR data beginning in April 1, 2017 to April 24, 2022, the following were observed effluent non-compliances.

Summary of Non-Compliance with NPDES Effluent Limits

Beginning April 1, 2017 and Ending April 24, 2022

NON_COMPLIANCE_DATE	NON_COMPL_TYPE_DESC	NON_COMPL_CATEGORY_DESC	PARAMETER	SAMPLE_VALUE	VIOLATION_CONDITION	PERMIT_VALUE	UNIT_OF_MEASURE	STAT_BASE_CODE
11/30/2017	Late DMR Submission	Other Violations						
12/30/2017	Late DMR Submission	Other Violations						
2/28/2018	Sample type not in accordance with permit	Other Violations	pH					
10/5/2018	Violation of permit condition	Effluent	pH	5.75	<	6.0	S.U.	Minimum
3/25/2019	Violation of permit condition	Effluent	pH	5.41	<	6.0	S.U.	Minimum
5/3/2021	Violation of permit condition	Effluent	pH	4.28	<	6.0	S.U.	Minimum
12/8/2021	Violation of permit condition	Effluent	pH	5.28	<	6.0	S.U.	Minimum
4/7/2022	Violation of permit condition	Effluent	pH	5.83	<	6.0	S.U.	Minimum

3.3.2 Non-Compliance- Enforcement Actions

A summary of the non-compliance enforcement actions for the current permit cycle is as follows:

Beginning in April 1, 2017 to April 24, 2022, there were no observed enforcement actions.

3.4 Summary of Biosolids Disposal

A summary of the biosolids disposed of from the facility is as follows.

The facility discharges non-contact cooling water. Biosolids disposal is not suspected.

3.5 Open Violations

No open violations existed as of April 2022.

4.0 Receiving Waters and Water Supply Information Detail Summary

4.1 Receiving Waters

The receiving waters has been determined to be Tributary 16379 to Spencer Run. The sequence of receiving streams that the Tributary 16379 to Spencer Run discharges into are Spencer Run, Beaverdam Branch, Frankstown Juniata River, Juniata River, and the Susquehanna River which eventually drains into the Chesapeake Bay.

4.2 Public Water Supply (PWS) Intake

The closest PWS to the subject facility is Mifflintown MA (PWS ID #4340008) located approximately 101 miles downstream of the subject facility on the Juniata River. Based upon the distance and the flow rate of the facility, the PWS should not be impacted.

4.3 Class A Wild Trout Streams

Class A Wild Trout Streams are waters that support a population of naturally produced trout of sufficient size and abundance to support long-term and rewarding sport fishery. DEP classifies these waters as high-quality coldwater fisheries.

The information obtained from EMAP suggests that no Class A Wild Trout Fishery will be impacted by this discharge.

4.4 2022 Integrated List of All Waters (303d Listed Streams)

Section 303(d) of the Clean Water Act requires States to list all impaired surface waters not supporting uses even after appropriate and required water pollution control technologies have been applied. The 303(d) list includes the reason for impairment which may be one or more point sources (i.e. industrial or sewage discharges) or non-point sources (i.e. abandoned mine lands or agricultural runoff and the pollutant causing the impairment such as metals, pH, mercury or siltation).

States or the U.S. Environmental Protection Agency (EPA) must determine the conditions that would return the water to a condition that meets water quality standards. As a follow-up to listing, the state or EPA must develop a Total Maximum Daily Load (TMDL) for each waterbody on the list. A TMDL identifies allowable pollutant loads to a waterbody from both point and non-point sources that will prevent a violation of water quality standards. A TMDL also includes a margin of safety to ensure protection of the water.

The water quality status of Pennsylvania's waters uses a five-part categorization (lists) of waters per their attainment use status. The categories represent varying levels of attainment, ranging from Category 1, where all designated water uses are met to Category 5 where impairment by pollutants requires a TMDL for water quality protection.

The receiving waters is listed in the 2022 Pennsylvania Integrated Water Quality Monitoring and Assessment Report as a Category 2 waterbody. The surface waters is an attaining stream that supports aquatic life. The designated use has been classified as protected waters for warm water fishes (WWF) and migratory fishes (MF).

4.5 Low Flow Stream Conditions

Water quality modeling estimates are based upon conservative data inputs. The data are typically estimated using either a stream gauge or through USGS web based StreamStats program. The NPDES effluent limits are based upon the combined flows from both the stream and the facility discharge.

A conservative approach to estimate the impact of the facility discharge using values which minimize the total combined volume of the stream and the facility discharge. The volumetric flow rate for the stream is based upon the seven-day, 10-year low flow (Q710) which is the lowest estimated flow rate of the stream during a 7 consecutive day period that occurs once in 10 -year time period. The facility discharge is based upon a known design capacity of the subject facility.

The closest WQN station to the subject facility is the Beaverdam Branch Juniata River (WQN252). This WQN station is located approximately 5 miles downstream of the subject facility.

The closest gauge station to the subject facility is the Frankstown Branch Juniata River station at Williamsburg, PA (USGS station number 1556000). This gauge station is located approximately 19 miles downstream of the subject facility.

The low flow yield and the Q710 for the subject facility was estimated from StreamStats and a streamgauge. The estimation is shown below.

Gauge Station Data			
USGS Station Number	1556000		
Station Name	Frankstown Br Juniata River at Williamsburg, PA		
Q710	47.8	ft^3/sec	
Drainage Area (DA)	291	mi^2	
Calculations			
The low flow yield of the gauge station is:			
Low Flow Yield (LFY) = Q710 / DA			
LFY =	(47.8 ft^3/sec / 291 mi^2)		
LFY =	0.1643	$ft^3/sec/mi^2$	
The low flow at the subject site is based upon the DA of		0.36	mi^2
Q710 = (LFY@gauge station)(DA@Subject Site)			
Q710 = (0.1643 $ft^3/sec/mi^2$)(0.36 mi^2)			
Q710 =	0.059	ft^3/sec	

4.6 Summary of Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.0098
Latitude	40º 27' 9.15"	Longitude	-78º 25' 52.98"
Quad Name		Quad Code	
Wastewater Description:	Noncontact Cooling Water (NCCW)		

Receiving Waters	Unnamed Tributary to Spencer Run (WWF)	Stream Code	16379
NHD Com ID	65608636	RMI	0.73
Drainage Area	0.36	Yield (cfs/mi^2)	0.1643
Q_{7-10} Flow (cfs)	0.059	Q_{7-10} Basis	StreamStats
Elevation (ft)	1033	Slope (ft/ft)	
Watershed No.	11-A	Chapter 93 Class.	WWF, MF
Existing Use	Same as Chapter 93 class	Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s) supports aquatic life		
Cause(s) of Impairment	Not applicable		
Source(s) of Impairment	Not applicable		
TMDL Status	Final	Name	Beaverdam Branch Watershed

Background/Ambient Data		Data Source
pH (SU)	7.3	Median July to Sept; WQN 252
Temperature (°C)	19.5	Median July to Sept; WQN 252
Hardness (mg/L)	120	Historical median; WQN 252
Other:		

Nearest Downstream Public Water Supply Intake		Mifflintown MA	
PWS Waters	Juniata River	Flow at Intake (cfs)	
PWS RMI	37	Distance from Outfall (mi)	

5.0: Overview of Presiding Water Quality Standards

5.1 General

There are at least six (6) different policies which determines the effluent performance limits for the NPDES permit. The policies are technology based effluent limits (TBEL), water quality based effluent limits (WQBEL), antidegradation, total maximum daily loading (TMDL), anti-backsliding, and whole effluent toxicity (WET) The effluent performance limitations enforced are the selected permit limits that is most protective to the designated use of the receiving waters. An overview of each of the policies that are applicable to the subject facility has been presented in Section 6.

5.2.1 Technology-Based Limitations

TBEL treatment requirements under section 301(b) of the Act represent the minimum level of control that must be imposed in a permit issued under section 402 of the Act (40 CFR 125.3).

5.3 Water Quality-Based Limitations

WQBEL are based on the need to attain or maintain the water quality criteria and to assure protection of designated and existing uses (PA Code 25, Chapter 92a.2). The subject facility that is typically enforced is the more stringent limit of either the TBEL or the WQBEL.

Determination of WQBEL is calculated by spreadsheet analysis or by a computer modeling program developed by DEP. DEP permit engineers utilize the following computing programs for WQBEL permit limitations: (1) MS Excel worksheet for Total Residual Chorine (TRC); (2) WQM 7.0 for Windows Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen Version 1.1 (WQM Model) (3) Toxics using DEP Toxics Management Spreadsheet for Toxics pollutants, and (4) Implementation For Temperature Criteria.

The modeling point nodes utilized for this facility are summarized below.

General Data 1 (Modeling Point #1)	***Input Value***	***Units***
Stream Code	16379	
River Mile Index	0.73	miles
Elevation	1033	feet
Latitude	40.4525	
Longitude	-78.431389	
Drainage Area	0.36	sq miles
Low Flow Yield	0.0091	cfs/sq mile

5.3.1 Water Quality Modeling 7.0

The facility is not subject to water quality modeling for DO, CBOD5, and NH_3-N.

5.3.2 Toxics Modeling

The facility is not subject to toxics modeling.

5.3.3 Whole Effluent Toxicity (WET)

The facility is not subject to WET.

5.4 Total Maximum Daily Loading (TMDL)

5.4.1 TMDL

The goal of the Clean Water Act (CWA), which governs water pollution, is to ensure that all of the Nation's waters are clean and healthy enough to support aquatic life and recreation. To achieve this goal, the CWA created programs designed to regulate and reduce the amount of pollution entering United States waters. Section 303(d) of the CWA requires states to assess their waterbodies to identify those not meeting water quality standards. If a waterbody is not meeting standards, it is listed as impaired and reported to the U.S. Environmental Protection Agency. The state then develops a plan to clean up the impaired waterbody. This plan includes the development of a Total Maximum Daily Load (TMDL) for the pollutant(s) that were found to be the cause of the water quality violations. A Total Maximum Daily Load (TMDL) calculates the maximum amount of a specific pollutant that a waterbody can receive and still meet water quality standards.

A TMDL for a given pollutant and waterbody is composed of the sum of individual wasteload allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources and natural background levels. In addition, the TMDL must include an implicit or explicit margin of safety (MOS) to account for the uncertainty in the relationship between pollutant loads and the quality of the receiving waterbody. The TMDL components are illustrated using the following equation:

$$TMDL = \Sigma WLAs + \Sigma LAs + MOS$$

Pennsylvania has committed to restoring all impaired waters by developing TMDLs and TMDL alternatives for all impaired waterbodies. The TMDL serves as the starting point or planning tool for restoring water quality.

5.4.1.1 Local TMDL

The subject facility does not discharge into a local TMDL.

5.4.1.2 Chesapeake Bay TMDL Requirement

The Chesapeake Bay Watershed is a large ecosystem that encompasses approximately 64,000 square miles in Maryland, Delaware, Virginia, West Virginia, Pennsylvania, New York and the District of Columbia. An ecosystem is composed of interrelated parts that interact with each other to form a whole. All of the plants and animals in an ecosystem depend on each other in some way. Every living thing needs a healthy ecosystem to survive. Human activities affect the Chesapeake Bay ecosystem by adding pollution, using resources and changing the character of the land.

Most of the Chesapeake Bay and many of its tidal tributaries have been listed as impaired under Section 303(d) of the federal Water Pollution Control Act ("Clean Water Act"), 33 U.S.C. § 1313(d). While the Chesapeake Bay is outside the boundaries of Pennsylvania, more than half of the State lies within the watershed. Two major rivers in Pennsylvania are part of the Chesapeake Bay Watershed. They are (a) the Susquehanna River and (b) the Potomac River. These two rivers total 40 percent of the entire Chesapeake Bay watershed.

The overall management approach needed for reducing nitrogen, phosphorus and sediment are provided in the Bay TMDL document and the Phase I, II, and III WIPs which is described in the Bay TMDL document and Executive Order 13508.

The Bay TMDL is a comprehensive pollution reduction effort in the Chesapeake Bay watershed identifying the necessary pollution reductions of nitrogen, phosphorus and sediment across the seven Bay watershed jurisdictions of Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia and the District of Columbia to meet applicable water quality standards in the Bay and its tidal waters.

The Watershed Implementation Plans (WIPs) provides objectives for how the jurisdictions in partnership with federal and local governments will achieve the Bay TMDL's nutrient and sediment allocations.

Phase 3 WIP provides an update on Chesapeake Bay TMDL implementation activities for point sources and DEP's current implementation strategy for wastewater. The latest revision of the supplement was September 13, 2021.

The Chesapeake Bay TMDL (Appendix Q) categorizes point sources into four sectors:

- Sector A- significant sewage dischargers;
- Sector B- significant industrial waste (IW) dischargers;
- Sector C- non-significant dischargers (both sewage and IW facilities); and
- Sector D- combined sewer overflows (CSOs).

All sectors contain a listing of individual facilities with NPDES permits that were believed to be discharging at the time the TMDL was published (2010). All sectors with the exception of the non-significant dischargers have individual wasteload allocations (WLAs) for TN and TP assigned to specific facilities. Non-significant dischargers have a bulk or aggregate allocation for TN and TP based on the facilities in that sector that were believed to be discharging at that time and their estimated nutrient loads.

Cap Loads will be established in permits as Net Annual TN and TP loads (lbs/yr) that apply during the period of October 1 – September 30. For facilities that have received Cap Loads in any other form, the Cap Loads will be modified accordingly when the permits are renewed.

Offsets have been incorporated into Cap Loads in several permits issued to date. From this point forward, permits will be issued with the WLAs as Cap Loads and will identify Offsets separately to facilitate nutrient trading activities and compliance with the TMDL.

Based upon the supplement the subject facility has been categorized as a Sector C discharger. The supplement defines Sector C as a non-significant dischargers include sewage facilities (Phase 4 facilities: ≥ 0.2 MGD and < 0.4 MGD and Phase 5 facilities: > 0.002 MGD and < 0.2 MGD), small flow/single residence sewage treatment facilities (≤ 0.002 MGD), and non-significant IW facilities, all of which may be covered by statewide General Permits or may have individual NPDES permits.

At this time, there are approximately 850 Phase 4 and 5 sewage facilities, approximately 715 small flow sewage treatment facilities covered by a statewide General Permit, and approximately 300 non-significant IW facilities.

For non-significant IW facilities, monitoring and reporting of TN and TP will be required throughout the permit term in renewed or amended permits anytime the facility has the potential to introduce a net TN or TP increase to the load contained within the intake water used in processing. In general, facilities that discharge groundwater and cooling water with no addition of chemicals containing N or P do not require monitoring. Monitoring for facilities with other discharges will generally conform to the following minimum sampling frequencies, with the permit writer having final discretion:

Non-significant IW facilities that propose expansion or production increases and as a result will discharge at least 75 lbs/day TN or 25 lbs/day TP (on an annual average basis), will be classified as Significant IW dischargers and receive Cap Loads in their permits based on existing performance (existing TN/TP concentrations at current average annual flow).

In general, for new non-significant IW discharges (including existing facilities discharging without a permit), DEP will issue permits containing Cap Loads of “0” and these facilities will be expected to purchase credits and/or apply offsets to achieve compliance.

The facility discharges non-contact cooling water. This facility is not subject to Sector C monitoring requirements.

5.5 Anti-Degradation Requirement

Chapter 93.4a of the PA regulations requires that surface water of the Commonwealth of Pennsylvania may not be degraded below levels that protect the existing uses. The regulations specifically state that *Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected*. Antidegradation requirements are implemented through DEP’s guidance manual entitled Water Quality Antidegradation Implementation Guidance (Document #391-0300-02).

The policy requires DEP to protect the existing uses of all surface waters and the existing quality of High Quality (HQ) and Exceptional Value (EV) Waters. Existing uses are protected when DEP makes a final decision on any permit or approval for an activity that may affect a protected use. Existing uses are protected based upon DEP’s evaluation of the best available information (which satisfies DEP protocols and Quality Assurance/Quality Control (QA/QC) procedures) that indicates the protected use of the waterbody.

For a new, additional, or increased point source discharge to an HQ or EV water, the person proposing the discharge is required to utilize a nondischarge alternative that is cost-effective and environmentally sound when compared with the cost of the proposed discharge. If a nondischarge alternative is not cost-effective and environmentally sound, the person must use the best available combination of treatment, pollution prevention, and wastewater reuse technologies and assure that any discharge is nondegrading. In the case of HQ waters, DEP may find that after satisfaction of intergovernmental coordination and public participation requirements lower water quality is necessary to accommodate important economic or

social development in the area in which the waters are located. In addition, DEP will assure that cost-effective and reasonable best management practices for nonpoint source control in HQ and EV waters are achieved.

The subject facility's discharge will be to a non-special protection waters and the permit conditions are imposed to protect existing instream water quality and uses. Neither HQ waters or EV waters is impacted by this discharge.

5.6 Anti-Backsliding

Anti-backsliding is a federal regulation which prohibits a permit from being renewed, reissued, or modified containing effluent limitations which are less stringent than the comparable effluent limitations in the previous permit (40 CFR 122.l.1 and 40 CFR 122.l.2). A review of the existing permit limitations with the proposed permit limitations confirm that the facility is consistent with anti-backsliding requirements. The facility has proposed effluent limitations that are as stringent as the existing permit.

6.0 NPDES Parameter Details

The basis for the proposed sampling and their monitoring frequency that will appear in the permit for each individual parameter are itemized in this Section. The final limits are the more stringent of technology based effluent treatment (TBEL) requirements, water quality based (WQBEL) limits, TMDL, antidegradation, anti-degradation, or WET.

The reader will find in this section:

a) a justification of recommended permit monitoring requirements and limitations for each parameter in the proposed NPDES permit;
b) a summary of changes from the existing NPDES permit to the proposed permit; and
c) a summary of the proposed NPDES effluent limits.

6.1 Recommended Monitoring Requirements and Effluent Limitations

A summary of the recommended monitoring requirements and effluent limitations are itemized in the tables. The table is categorized by Conventional Pollutants and Disinfection.

6.1.1 Conventional Pollutants and Disinfection

The Thermal Worksheet estimates maximum temperatures should not exceed 110 F from March 1 to November 15. January and December should have maximum temperatures not exceeding 100 F. February should have temperatures not exceeding 108 F while the 2nd half of November should not exceed 106 F. Based upon 12 months of DMR (March 2021 to February 2022), the facility was well below the maximum temperature limits. The proposed permit shall continue daily monitoring for temperature.

Summary of Proposed NPDES Parameter Details for Conventional Pollutants and Disinfection
Veeder Root; PA0010677

Parameter	Permit Limitation Required by[1]:	Recommendation	
pH (S.U.)	TBEL	Monitoring:	The monitoring frequency shall be daily as a grab sample (Table 6-4).
		Effluent Limit:	Effluent limits may range from pH = 6.0 to 9.0
		Rationale:	The monitoring frequency has been assigned in accordance with Table 6-4 and the effluent limits assigned by Chapter 95.2(1).
Temperature	Thermal Guidance	Monitoring:	The monitoring frequency shall be daily as an in-stream sample (Table 6-4).
		Effluent Limit:	No effluent limits.
		Rationale:	The Thermal Worksheet estimates maximum temperatures should not exceed 110 F from March 1 to November 15. January and December should have maximum temperatures not exceeding 100 F. February should have temperatures not exceeding 108 F while the 2nd half of November should not exceed 106 F. Based upon 12 months of DMR (March 2021 to February 2022), the facility was well below the maximum temperature limits. The proposed permit shall continue daily monitoring for temperature.

Notes:

1 The NPDES permit was limited by (a) anti-Backsliding, (b) Anti-Degradation, (c) SOP, (d) TBEL, (e) TMDL, (f) WQBEL, (g) WET, or (h) Other

2 Monitoring frequency based on flow rate of 0.0098 MGD.

3 Table 6-4 (Self Monitoring Requirements for Industrial Discharges) in Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits) (Document # 362-0400-001) Revised 10/97

4 Water Quality Antidegradation Implementaton Guidance (Document # 391-0300-002)

5 Chesapeake Bay Phase 3 Watershed Implementation Plan Wastewater Supplement, Revised September 13, 2021

6.2 Summary of Changes From Existing Permit to Proposed Permit

A summary of how the proposed NPDES permit differs from the existing NPDES permit is summarized as follows.

- No changes in monitoring or effluent limits

6.3.1 Summary of Proposed NPDES Effluent Limits

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

The proposed NPDES effluent limitations are summarized in the table below.

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

I. A. For Outfall 001 , **Latitude** 40º 27' 9.00" , **Longitude** 78º 25' 53.00" , **River Mile Index** 0.73 , **Stream Code** 16379

Receiving Waters: Unnamed Tributary to Spencer Run (WWF)

Type of Effluent: Noncontact Cooling Water (NCCW)

1. The permittee is authorized to discharge during the period from **Permit Effective Date** through **Permit Expiration Date**.
2. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements and Footnotes).

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Temperature (deg F) (ºF)	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/day	I-S

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

at Outfall 001

Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☐	Toxics Management Spreadsheet (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☒	Temperature Model Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☐	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☐	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☐	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
☐	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP:
☐	Other:

Attachment A

Stream Stats/Gauge Data

Table 1. List of U.S. Geological Survey streamgage locations in and near Pennsylvania with updated streamflow statistics.—Continued

[Latitude and Longitude in decimal degrees; mi², square miles]

Streamgage number	Streamgage name	Latitude	Longitude	Drainage area (mi²)	Regulated[1]
01541303	West Branch Susquehanna River at Hyde, Pa.	41.005	-78.457	474	Y
01541308	Bradley Run near Ashville, Pa.	40.509	-78.584	6.77	N
01541500	Clearfield Creek at Dimeling, Pa.	40.972	-78.406	371	Y
01542000	Moshannon Creek at Osceola Mills, Pa.	40.850	-78.268	68.8	N
01542500	WB Susquehanna River at Karthaus, Pa.	41.118	-78.109	1,462	Y
01542810	Waldy Run near Emporium, Pa.	41.579	-78.293	5.24	N
01543000	Driftwood Branch Sinnemahoning Creek at Sterling Run, Pa.	41.413	-78.197	272	N
01543500	Sinnemahoning Creek at Sinnemahoning, Pa.	41.317	-78.103	685	N
01544000	First Fork Sinnemahoning Creek near Sinnemahoning, Pa.	41.402	-78.024	245	Y
01544500	Kettle Creek at Cross Fork, Pa.	41.476	-77.826	136	N
01545000	Kettle Creek near Westport, Pa.	41.320	-77.874	233	Y
01545500	West Branch Susquehanna River at Renovo, Pa.	41.325	-77.751	2,975	Y
01545600	Young Womans Creek near Renovo, Pa.	41.390	-77.691	46.2	N
01546000	North Bald Eagle Creek at Milesburg, Pa.	40.942	-77.794	119	N
01546400	Spring Creek at Houserville, Pa.	40.834	-77.828	58.5	N
01546500	Spring Creek near Axemann, Pa.	40.890	-77.794	87.2	N
01547100	Spring Creek at Milesburg, Pa.	40.932	-77.786	142	N
01547200	Bald Eagle Creek below Spring Creek at Milesburg, Pa.	40.943	-77.786	265	N
01547500	Bald Eagle Creek at Blanchard, Pa.	41.052	-77.604	339	Y
01547700	Marsh Creek at Blanchard, Pa.	41.060	-77.606	44.1	N
01547800	South Fork Beech Creek near Snow Shoe, Pa.	41.024	-77.904	12.2	N
01547950	Beech Creek at Monument, Pa.	41.112	-77.702	152	N
01548005	Bald Eagle Creek near Beech Creek Station, Pa.	41.081	-77.549	562	Y
01548500	Pine Creek at Cedar Run, Pa.	41.522	-77.447	604	N
01549000	Pine Creek near Waterville, Pa.	41.313	-77.379	750	N
01549500	Blockhouse Creek near English Center, Pa.	41.474	-77.231	37.7	N
01549700	Pine Creek below Little Pine Creek near Waterville, Pa.	41.274	-77.324	944	Y
01550000	Lycoming Creek near Trout Run, Pa.	41.418	-77.033	173	N
01551500	WB Susquehanna River at Williamsport, Pa.	41.236	-76.997	5,682	Y
01552000	Loyalsock Creek at Loyalsockville, Pa.	41.325	-76.912	435	N
01552500	Muncy Creek near Sonestown, Pa.	41.357	-76.535	23.8	N
01553130	Sand Spring Run near White Deer, Pa.	41.059	-77.077	4.93	N
01553500	West Branch Susquehanna River at Lewisburg, Pa.	40.968	-76.876	6,847	Y
01553700	Chillisquaque Creek at Washingtonville, Pa.	41.062	-76.680	51.3	N
01554000	Susquehanna River at Sunbury, Pa.	40.835	-76.827	18,300	Y
01554500	Shamokin Creek near Shamokin, Pa.	40.810	-76.584	54.2	N
01555000	Penns Creek at Penns Creek, Pa.	40.867	-77.048	301	N
01555500	East Mahantango Creek near Dalmatia, Pa.	40.611	-76.912	162	N
01556000	Frankstown Branch Juniata River at Williamsburg, Pa.	40.463	-78.200	291	N
01557500	Bald Eagle Creek at Tyrone, Pa.	40.684	-78.234	44.1	N
01558000	Little Juniata River at Spruce Creek, Pa.	40.613	-78.141	220	N
01559000	Juniata River at Huntingdon, Pa.	40.485	-78.019	816	LF
01559500	Standing Stone Creek near Huntingdon, Pa.	40.524	-77.971	128	N
01559700	Sulphur Springs Creek near Manns Choice, Pa.	39.978	-78.619	5.28	N
01560000	Dunning Creek at Belden, Pa.	40.072	-78.493	172	N

Table 2. Selected low-flow statistics for streamgage locations in and near Pennsylvania.—Continued

[ft³/s; cubic feet per second; —, statistic not computed; <, less than]

Streamgage number	Period of record used in analysis[1]	Number of years used in analysis	1-day, 10-year (ft³/s)	7-day, 10-year (ft³/s)	7-day, 2-year (ft³/s)	30-day, 10-year (ft³/s)	30-day, 2-year (ft³/s)	90-day, 10-year (ft³/s)
01546000	1912–1934	17	1.8	2.2	6.8	3.7	12.1	11.2
01546400	1986–2008	23	13.5	14.0	19.6	15.4	22.3	18.7
01546500	1942–2008	67	26.8	29.0	41.3	31.2	44.2	33.7
01547100	1969–2008	40	102	105	128	111	133	117
01547200	1957–2008	52	99.4	101	132	106	142	115
01547500	[2]1971–2008	38	28.2	109	151	131	172	153
01547500	[3]1956–1969	14	90.0	94.9	123	98.1	131	105
01547700	1957–2008	52	.5	.6	2.7	1.1	3.9	2.2
01547800	1971–1981	11	1.6	1.8	2.4	2.1	2.9	3.5
01547950	1970–2008	39	12.1	13.6	28.2	17.3	36.4	23.8
01548005	[2]1971–2000	25	142	151	206	178	241	223
01548005	[3]1912–1969	58	105	114	147	125	165	140
01548500	1920–2008	89	21.2	24.2	50.1	33.6	68.6	49.3
01549000	1910–1920	11	26.0	32.9	78.0	46.4	106	89.8
01549500	1942–2008	67	.6	.8	2.5	1.4	3.9	2.6
01549700	1959–2008	50	33.3	37.2	83.8	51.2	117	78.4
01550000	1915–2008	94	6.6	7.6	16.8	11.2	24.6	18.6
01551500	[2]1963–2008	46	520	578	1,020	678	1,330	919
01551500	[3]1901–1961	61	400	439	742	523	943	752
01552000	1927–2008	80	20.5	22.2	49.5	29.2	69.8	49.6
01552500	1942–2008	67	.9	1.2	3.1	1.7	4.4	3.3
01553130	1969–1981	13	1.0	1.1	1.5	1.3	1.8	1.7
01553500	[2]1968–2008	41	760	838	1,440	1,000	1,850	1,470
01553500	[3]1941–1966	26	562	619	880	690	1,090	881
01553700	1981–2008	28	9.1	10.9	15.0	12.6	17.1	15.2
01554000	[2]1981–2008	28	1,830	1,990	3,270	2,320	4,210	3,160
01554000	[3]1939–1979	41	1,560	1,630	2,870	1,880	3,620	2,570
01554500	1941–1993	53	16.2	22.0	31.2	25.9	35.7	31.4
01555000	1931–2008	78	33.5	37.6	58.8	43.4	69.6	54.6
01555500	1931–2008	78	4.9	6.5	18.0	9.4	24.3	16.6
01556000	1918–2008	91	43.3	47.8	66.0	55.1	75.0	63.7
01557500	1946–2008	63	2.8	3.2	6.3	4.2	8.1	5.8
01558000	1940–2008	69	56.3	59.0	79.8	65.7	86.2	73.7
01559000	1943–2008	66	104	177	249	198	279	227
01559500	1931–1958	28	9.3	10.5	15.0	12.4	17.8	15.8
01559700	1963–1978	16	.1	.1	.2	.1	.3	.2
01560000	1941–2008	68	8.5	9.4	15.6	12.0	20.2	16.2
01561000	1932–1958	27	.4	.5	1.6	.8	2.5	1.7
01562000	1913–2008	96	64.1	67.1	106	77.4	122	94.5
01562500	1931–1957	27	1.1	1.6	3.8	2.3	5.4	3.7
01563200	[2]1974–2008	35	—	—	—	112	266	129
01563200	[3]1948–1972	25	10.3	28.2	86.1	64.5	113	95.5
01563500	[2]1974–2008	35	384	415	519	441	580	493
01563500	[3]1939–1972	34	153	242	343	278	399	333
01564500	1940–2008	69	3.6	4.2	10.0	6.2	14.4	10.6

StreamStats Report

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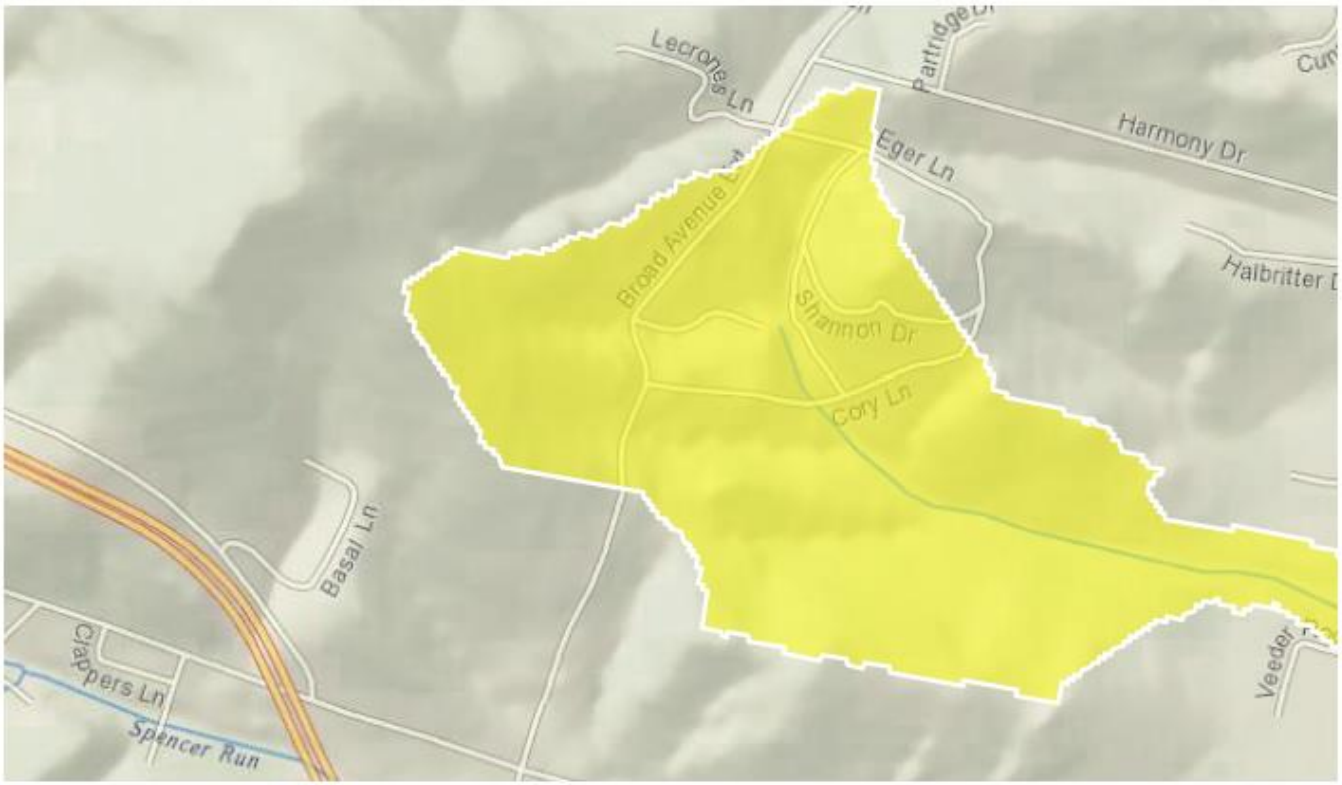


Veeder-Root Co. PA0010677 Modeling Point #1 March 2022

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.36	square miles
PRECIP	Mean Annual Precipitation	39	inches
STRDEN	Stream Density -- total length of streams divided by drainage area	2.36	miles per square mile
ROCKDEP	Depth to rock	3.7	feet
CARBON	Percentage of area of carbonate rock	0	percent

Low-Flow Statistics Parameters [Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.36	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	39	inches	35	50.4
STRDEN	Stream Density	2.36	miles per square mile	0.51	3.1
ROCKDEP	Depth to Rock	3.7	feet	3.32	5.65
CARBON	Percent Carbonate	0	percent	0	99

Low-Flow Statistics Disclaimers [Low Flow Region 2]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Low-Flow Statistics Flow Report [Low Flow Region 2]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0116	ft^3/s
30 Day 2 Year Low Flow	0.0188	ft^3/s
7 Day 10 Year Low Flow	0.00328	ft^3/s
30 Day 10 Year Low Flow	0.00549	ft^3/s
90 Day 10 Year Low Flow	0.0115	ft^3/s

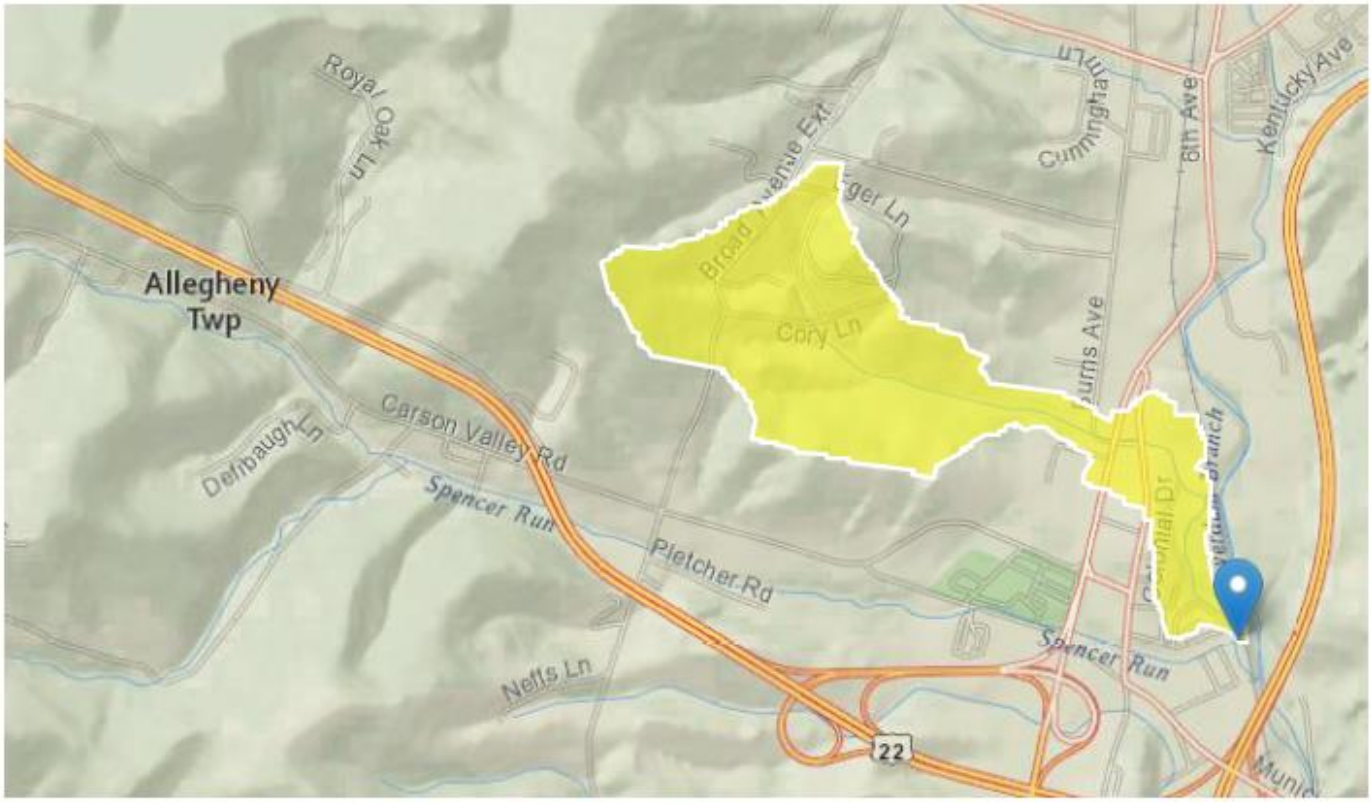
Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

Application Version: 4.7.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2

StreamStats Report

Region ID: PA
Workspace ID: PA20220302180943241000
Clicked Point (Latitude, Longitude): 40.44590, -78.42571
Time: 2022-03-02 13:10:05 -0500



Veeder-Root Co. PA0010677 Modeling Point #2 March 2022

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.46	square miles
PRECIP	Mean Annual Precipitation	39	inches
STRDEN	Stream Density -- total length of streams divided by drainage area	3.41	miles per square mile
ROCKDEP	Depth to rock	4.1	feet
CARBON	Percentage of area of carbonate rock	0	percent

Low-Flow Statistics Parameters [Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.46	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	39	inches	35	50.4
STRDEN	Stream Density	3.41	miles per square mile	0.51	3.1
ROCKDEP	Depth to Rock	4.1	feet	3.32	5.65
CARBON	Percent Carbonate	0	percent	0	99

Low-Flow Statistics Disclaimers [Low Flow Region 2]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Low-Flow Statistics Flow Report [Low Flow Region 2]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0131	ft^3/s
30 Day 2 Year Low Flow	0.0207	ft^3/s
7 Day 10 Year Low Flow	0.00414	ft^3/s
30 Day 10 Year Low Flow	0.00657	ft^3/s
90 Day 10 Year Low Flow	0.0127	ft^3/s

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

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Application Version: 4.7.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2

Attachment B

Temperature Modeling

Facility:	**Veeder-Root Co.**
Permit Number:	PA0010677
Stream Name:	Tributary 16379 to Spencer Run
Analyst/Engineer:	
Stream Q7-10 (cfs):	0.059

	Facility Flows				Stream Flows			
	Intake (Stream) (MGD)	Intake (External) (MGD)	Consumptive Loss (MGD)	Discharge Flow (MGD)	PMF	Upstream Stream Flow (cfs)	Adjusted Stream Flow (cfs)	Downstream Stream Flow (cfs)
Jan 1-31	0	0.0098	0	0.0098	1.00	0.18	0.18	0.20
Feb 1-29	0	0.0098	0	0.0098	1.00	0.21	0.21	0.22
Mar 1-31	0	0.0098	0	0.0098	1.00	0.38	0.38	0.40
Apr 1-15	0	0.0098	0	0.0098	1.00	0.53	0.53	0.54
Apr 16-30	0	0.0098	0	0.0098	1.00	0.53	0.53	0.54
May 1-15	0	0.0098	0	0.0098	1.00	0.30	0.30	0.31
May 16-31	0	0.0098	0	0.0098	1.00	0.30	0.30	0.31
Jun 1-15	0	0.0098	0	0.0098	1.00	0.17	0.17	0.19
Jun 16-30	0	0.0098	0	0.0098	1.00	0.17	0.17	0.19
Jul 1-31	0	0.0098	0	0.0098	1.00	0.08	0.08	0.10
Aug 1-15	0	0.0098	0	0.0098	1.00	0.08	0.08	0.10
Aug 16-31	0	0.0098	0	0.0098	1.00	0.08	0.08	0.10
Sep 1-15	0	0.0098	0	0.0098	1.00	0.06	0.06	0.08
Sep 16-30	0	0.0098	0	0.0098	1.00	0.06	0.06	0.08
Oct 1-15	0	0.0098	0	0.0098	1.00	0.08	0.08	0.09
Oct 16-31	0	0.0098	0	0.0098	1.00	0.08	0.08	0.09
Nov 1-15	0	0.0098	0	0.0098	1.00	0.11	0.11	0.12
Nov 16-30	0	0.0098	0	0.0098	1.00	0.11	0.11	0.12
Dec 1-31	0	0.0098	0	0.0098	1.00	0.18	0.18	0.19

Please forward all comments to Tom Starosta at 717-787-4317, tstarosta@state.pa.us.

Version 2.0 -- 07/01/2005 Reference: Implementation Guidance for Temperature Criteria, DEP-ID: 391-2000-017

NOTE: The user can only edit fields that are blue.

NOTE: MGD x 1.547 = cfs.

Facility:	**Veeder-Root Co.**							
Permit Number:	PA0010677							
Stream:	Tributary 16379 to Spencer Run							
	WWF			**WWF**		**WWF**		**PMF**
	Ambient Stream	Ambient Stream	Target Maximum	Daily		Daily		
	Temperature (ºF)	Temperature (ºF)	Stream Temp.[1]	WLA[2]		WLA[3]	at Discharge	
	(Default)	(Site-specific data)	(ºF)	(Million BTUs/day)		(ºF)	Flow (MGD)	
Jan 1-31	35	0	40	N/A -- Case 2		100.1	0.0098	1.00
Feb 1-29	35	0	40	N/A -- Case 2		108.1	0.0098	1.00
Mar 1-31	40	0	46	N/A -- Case 2		110.0	0.0098	1.00
Apr 1-15	47	0	52	N/A -- Case 2		110.0	0.0098	1.00
Apr 16-30	53	0	58	N/A -- Case 2		110.0	0.0098	1.00
May 1-15	58	0	64	N/A -- Case 2		110.0	0.0098	1.00
May 16-31	62	0	72	N/A -- Case 2		110.0	0.0098	1.00
Jun 1-15	67	0	80	N/A -- Case 2		110.0	0.0098	1.00
Jun 16-30	71	0	84	N/A -- Case 2		110.0	0.0098	1.00
Jul 1-31	75	0	87	N/A -- Case 2		110.0	0.0098	1.00
Aug 1-15	74	0	87	N/A -- Case 2		110.0	0.0098	1.00
Aug 16-31	74	0	87	N/A -- Case 2		110.0	0.0098	1.00
Sep 1-15	71	0	84	N/A -- Case 2		110.0	0.0098	1.00
Sep 16-30	65	0	78	N/A -- Case 2		110.0	0.0098	1.00
Oct 1-15	60	0	72	N/A -- Case 2		110.0	0.0098	1.00
Oct 16-31	54	0	66	N/A -- Case 2		110.0	0.0098	1.00
Nov 1-15	48	0	58	N/A -- Case 2		110.0	0.0098	1.00
Nov 16-30	42	0	50	N/A -- Case 2		106.4	0.0098	1.00
Dec 1-31	37	0	42	N/A -- Case 2		100.4	0.0098	1.00

[1] This is the maximum of the WWF WQ criterion or the ambient temperature. The ambient temperature may be either the design (median) temperature for WWF, or the ambient stream temperature based on site-specific data entered by the user. A minimum of 1ºF above ambient stream temperature is allocated.

[2] The WLA expressed in Million BTUs/day is valid for Case 1 scenarios, and disabled for Case 2 scenarios.

[3] The WLA expressed in ºF is valid only if the limit is tied to a daily discharge flow limit (may be used for Case 1 or Case 2). WLAs greater than 110ºF are displayed as 110ºF.